

**Minutes of the Carlisle Board of Health  
March 10, 2015**

**Bills**

**Alternative Technology Discussion**

- Benfield Farms
- FAST system (Bio-Microbics, Inc.)
- Perc-Rite System (Oakson, Inc)

**DISCUSSION ITEMS**

Swine Permit Regulations – discussion of fees and requirements

Deer Panel Discussion – Survey Summary (Judy Hodges)

Region 4a Emergency Planning Funding

Town Caucus Results

The meeting was called to order by the Chairman at 7:00 pm at town hall. Present were Board members Bill Risso (Chairman), Lee Storrs, Donna Margolies, Catherine Galligan, and Todd Thorsen. Also present Linda Fantasia, Health Agent, Rob Frado (TCH) and Cynthia Sorn (Carlisle Mosquito)

**BILLS – Two telephone visits by Emerson Home Care. It was moved (Galligan) and seconded (Storrs) to approve the Emerson Home Care invoice. Motion passed 5-9-0**

**ADMINISTRATIVE REPORTS** – Sixteen high school students volunteered to help with the Rabies Clinic at the high school service fair, although only four were needed. A gift certificate to *Sorrento's Pizza* was a big draw to the booth.

**DISCUSSION ITEMS**

**Deer Panel Discussion Summary** - Judy Hodges prepared an analysis of the survey results collected after the talk. Galligan noted that some audience members, possibly hunters, did not fill out the surveys since they were from other towns. She also said that audience members had not realized the ecological impacts of over grazing. The Selectmen agreed to a non-binding ballot question to see if the town wants to allow bow hunting deer on public land. If the response is positive, a task force of interested parties would be created. Pat Huckery of the MA Division of Fish and Wildlife will be speaking about deer management at the Conservation Coffee on 3/11/15. The Board agreed to review the analysis and make it available on the town website.

**Region 4A Funding** – mini-grant requests may be submitted for unspent funds. Carlisle did not use \$1492 of its local allocation. It could not be applied to Blackboard Connect since there is not enough time left in this year's contract. Funds must be used in the same fiscal year. Fantasia suggested upgrading the I Phone and I Pad, both of which are more than five years old

**Town Caucus** – Thorsen and Margolies were nominated for the two three year terms. The Board thanked them for being willing to continue on the Board.

**Request for Engineering Services – 106 Greystone Lane.**

Fantasia denied a request made late Friday afternoon by the installer for an excavation inspection on Monday morning. It would have been difficult to confirm the inspection without working over the weekend and the installer did not provide a reason that met the Board's criteria for special requests other than a closing the first week in April. The owner then contacted the Building Inspector who did not agree with the decision and told the owner to contact the Board's chairman. Once all of the parties had all of the information it was determined that the situation did not warrant a special service. The inspection is scheduled for Wednesday morning.

The Board agreed that this was an opportunity to review its engineering services since the TCG contract is up for renewal in June and any changes requested by the Board could be incorporated into the new contract. In addition to the inspection schedule, there may be other services that need consideration based on current regulations and workload. Risso, Galligan and Fantasia will meet with Frado to discuss services and the contract. The Board also decided that it would like to have input from installers, builders and engineers on how the Board provides engineering services. The Board is aware of complaints about the current schedule because of the Wednesday only inspections. Frado accommodates special requests as his schedule allows. The Board has a specific policy based on need for requesting special engineering services. The Board is considering whether there is a need to offer two days a week for field services. The Board is also interested in shortening the 14-day plan review time. Frado is willing to consider this if there is a realistic cap on the number of plans to be reviewed in one week. The Board will invite installers and engineers to a future meeting. Suggestions may also be submitted in writing. The working group (Risso, Galligan, Frado and Fantasia) will meet 3/18/15 to discuss the current engineering services schedule.

## **BENFIELD FARMS – ALTERNATIVE TECHNOLOGY ISSUES**

Present: Toby Kramer (NOAH), Susie Curreri – Property Manager, Mark Dubos – Facility Manager, Mark Cottreau – Clearwater Industries (CWI), Rob Sarmanian – Oakson Inc., Mike Moreau – Wastewater Treatment Services (WTS), Mark Beaudry – Meridian Engineering. Lauren Usilton – J&R Engineering Services, Jim Bell – BioMicrobics via phone conference.

Risso explained that the Board had invited the representatives in order to discuss whether the alternative systems, a MicroFAST Model 9.0 manufactured by Bio-Microbics, Inc. and a PERC-Rite Drip Dispersal System, Model WD-25, manufactured by American Manufacturing Co., were operating properly at Benfield and whether the Board should be concerned about permitting these technologies in the future. The Board had received a number of complaints from residents about odor around the pump house and Frado detected strong odors on at least two site visits. Kramer agreed that there have been problems. They are still trying to identify the cause and a remedy. Kramer said that all of the senior rental units have been occupied since November. There are 30 residents living in the 26-unit facility. The system should be fully operational.

Moreau, whose company WTS services the FAST system, explained that occasional odors are to be expected during normal operation of the system. He agreed the strong odors emanating from the Benfield system are unusual. They are noticeably stronger near the vent pipe. Moreau is currently focusing on Nitrite levels in the system. The last testing in January showed high levels of Nitrite. The sample was taken from the Anoxic Zone that surrounds the FAST and not the effluent. The level is high enough to conclude that the nitrifying bacteria may not be fully established interrupting the Nitrogen-Ammonia-Nitrate process. Nitrites would not cause the odor but the odor could be related to a problem with the processing. Currently the system is not in compliance.

One issue that was identified and could possibly be affecting the bacteria is the water temperature which is under 50° F. The water should not be that cold entering the system. Normal temperature in a settling tank is approximately 60°F. There was no indication of infiltration into the system (drain spouts, surface runoff). There has been a lot of snow and extremely cold weather this winter. Moreau has been in touch with Dr. Reza Shams of Bio-Microbics about the problem. Moreau has never seen that level of nitrites in a system. The cold temperatures may be preventing the building up of bacteria before the conversion of nitrite into nitrate is complete. In October it was discovered that an air lift line had vibrated loose. This most likely happened during installation. The line was fixed and they expected the biomass to redevelop starting the second week in October. Moreau compared it to doing a second startup of the system. He expected better results within three to four weeks. The system, however, was not able to build sufficient biomass. WTS has reviewed cleaning products in use, checking for green cleaning ones. It is unlikely cleaning chemicals are causing the system problems, but they want to rule everything out.

Storrs asked about the high sodium level. The EPA guideline is a maximum of 20 mg/l sodium for anyone on a salt restricted diet. Since Benfield is a senior living facility, many of the tenants may be on a sodium restricted diet. The water had 75 mg/l of sodium at the last test. Moreau was aware of the results and that sodium can contribute to the formation of hydrogen sulfide. Hydrogen sulfide can be detected at very low concentrations by the offensive odor of rotten eggs. People are very sensitive to the odor. It was unknown whether the public water supply is tested for

sodium on a regular basis. There is a water softener which had to be repaired but it does not discharge into the septic tank. Fantasia said that if there is an exceedance of sodium a disclosure notice must be posted for residents. The Board has not been notified of any posting. Kramer said the tap water has not been a problem since the water softener was repaired.

Risso asked if the monitoring wells for the leaching system had been tested. Kramer said they had only been tested initially. She will have them checked according to the sampling criteria and the drinking water for sodium. Frado asked if Moreau had any idea what could be inhibiting the bacterial growth in the FAST. Moreau said the system will be tested this month. He expects an improvement since the weather is improving. Galligan asked what the incoming water temperatures were and whether the low flow plumbing fixtures might be causing additional retention time and interfering with the establishment of the biomass. Moreau did not think this was the case. Although they have not lab-sampled the bacteria, he visually checks the system through a port. Only a very thin layer of bacteria has formed on the media. Beaudry was asked about the floor drains in the pump house. He said they discharge into a drywell.

Usilton said there can be an interruption in processing that might result in an occasional odor. Seasonal occupancy can cause a spike in performance but this can be addressed. There is an alternative venting system that could eliminate the odors. It is an underground bio-vent that is covered with woodchips. The woodchips filter the odors so they are not noticeable above ground. It is an option to consider. Beaudry said there is very limited area to install the device. Usilton said the system could be laid out in parallel lines or forked around the treatment system. She calculated about 30' of vent lines would be needed. These systems work very well but it is important to replace the woodchips as they decay and not with mulch. Frado noted that some of the gaskets need to be resealed and there are bolts missing from some of the manhole covers. These should all be addressed.

Galligan asked how often the septic tank should be pumped. Usilton explained that for a single family home every three years should be sufficient. The sludge depth is checked during the required maintenance. For larger systems such as Benfield, once a year is recommended.

Cottreau (CWI) said the drip dispersal system is working fine. Sarmanian agreed. There is no evidence of breakout. It was last checked in January. The monitoring wells are being serviced by WTS not CWI. The last water meter reading for the leaching system was 1000 gpd. The system is designed for 3900 gpd.

Usilton and Moreau agreed that in hindsight the FAST system could have been seeded with a food source (sugar) to help establish the bacteria. This problem is unique compared to the approximately 1000 systems installed. Moreau added that the nitrite finding was unprecedented in the systems they maintain. Usilton said there are deodorizers that could be added to the system. The Garrison Place facility which has not started construction but uses the same FAST technology includes the bio-vent design.

The Board asked whether the drinking water had improved. During the summer and early fall residents were complaining about odors and clarity. Kramer said the hot water tanks had been cleaned of sediment. The water has always been safe to drink. The problems were mainly aesthetic. The tap water is now clear with no smell.

Bell agreed that Usilton and Moreau were taking the right steps. He was concerned about the sodium level. The water softener should be removing the sulfur in the water. He suggested rechecking this system.

Frado asked if it was possible to warm the water or insulate the tank. Usilton said J&R has systems in cold climates but there have been no problems. Risso suggested checking the risers in the manholes. Moreau said the system is tight. You can feel the air pressure so there is no air escaping. Galligan suggested checking with the lab on the sampling matrix.

Kramer suggested waiting for the next test results of all of the systems. Usilton said the bio-vent was an option. The venting as designed was adequate for the system. Moreau said they will be measuring the water temperature for the FAST on a weekly basis until the problem is resolved. The system is inspected quarterly. He expects the odor to dissipate as the system becomes fully established. Since there is no single cause identified, everything needs to

be checked. Tampering with too many features at the same time may cause confusing results. He would like to wait until the beginning of April before taking other steps. Moreau is confident that the Benfield problem can be resolved and that the system will be in full compliance by June.

Kramer agreed to do the following:

- Test the influent for sodium and sulfur
- Test the drinking water for sodium and sulfur and recheck previous testing
- Provide the April testing reports to the Board
- Check the laboratory sample matrix used for the sodium

The Board thanked those in attendance for meeting with the Board.

## **DISCUSSION ITEMS (cont.).**

### **Swine Permit Regulations**

The Board received of a letter of application from Jeff Brem to keep and raise up to six pigs on his property at 100 Long Ridge Road. There is a Town Regulation for Keeping Swine that was adopted in 1947. The Board has been discussing possible revisions as a result of another resident interested in raising pigs commercially. The Board agreed that it would want a public hearing on any application to establish a piggery. The Board is revising the current regulation which would apply to any pending application according to town counsel. The applicant will need to address potential runoff from the property, number of pigs, state licensing and health certificates, shelter, feeding and breeding. The Brem site plan does not have a shelter for the pigs. The pen is also only 40' from the roadway and visible to abutters. The Board agreed to send a letter to Brem requiring the public hearing at which time the above items will be addressed.

Galligan created a table of other towns' regulations and asked Board members to identify items that should be considered in the revised regulation. She will prepare a draft for consideration by the Board at the next meeting. Fantasia will check with town counsel on the Board's authority to require a public hearing. A piggery also falls under the Nuisance Statute.

## **NEW BUSINESS**

**Farmer's Market Self-Certification forms** – Galligan submitted draft forms to the Board. This will conclude the work begun by David Estabrook, under the MA DPH Summer Intern program. Vendors will fill out the self-certification and give it to the market managers. The Board will make a decision on the form at the next meeting.

There was no further business. Meeting voted to adjourn at 9:00 p.m.

Respectfully submitted,

Linda M. Fantasia  
Recorder